

THE DANIEL MANNIX BUILDING



The Daniel Mannix Building is a 6-Star Green Star building on ACU's Melbourne Campus. It was one of the first 6-Star education buildings constructed in Australia. Its 6-Star rating indicates that it has a world-leading sustainable design and construction.

The Daniel Mannix Building is a 7-storey building of 16,200m². The building is occupied by many schools in the Faculty of Health Science, as well as medical clinics, the Phillipa Brazill Lecture Theatre and the St Mary of the Cross MacKillop Chapel.

Building Sustainability Features

Energy

The building has many features that ensure it uses energy efficiently. These include:

- High-efficiency heating and air-conditioning units
- Lighting sensors and high-efficiency lighting designed to eliminate head-ache inducing flicker common to older fluorescent lights
- Combined solar and gas hot water systems
- Active-Mass Cooling System: this is a system of pipes embedded in the concrete structure of the floors and ceilings. These pipes carry water that absorb excess heat inside and expels it from the building.
- Underfloor Air Distribution: heated and cooled air is distributed through vents in the floor. The air flows from the vents slowly to prevent drafts, which can make the air feel up to 3°C colder than it really is.
- Large fins on the east and west of the building and eaves on the north facade reduce glare and ingress of heat.

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Water

- Two 10kL rainwater tanks: one tank is in the basement to store rain water to flush the building's toilets, and the other tank is beneath the St Mary of the Cross Square, facing Brunswick Street, and stores water for irrigating the square's lawns and trees.
- Water efficient taps, toilets and urinals

Occupant health and wellbeing

- The building has 170 secure bike racks, many of them undercover.
- Several features act to improve the air quality inside the building. These include:
- Only fresh air circulates in all parts of the building, except in the basement, where there is some recirculation of air. Ventilation rates in the building are double the minimum stipulated by the Building Code of Australia.
- CO₂ sensors in the Philippa Brazill Lecture Theatre, to help occupants maintain their concentration
- The use of paints, adhesives, sealants, internal materials, furniture and finishes that minimise the emission of volatile organic compounds and formaldehyde

Sustainable Construction Practices

- Construction waste: 90% of the waste generated during construction was re-used or recycled;
- The building's timber is sourced from sustainably-managed forests
- The amount of concrete in the building was minimised through the inclusion of fly-ash (a by-product of coal burning otherwise sent to landfill)